2: Blackman E-5 (1920-1926) 1927
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121 114 politics and even religion cannot always avoid conforming to lines of ethnic cleavage too closely to prove wholly effective instruments of mutual understanding. Science, on the other hand, is absolutely disinterested in spirit. Its discoveries are for the whole world to enjoy. There can be no rivalry between the nations as regards their respective shares in the creation of knowledge except in so far as it takes the form of honourable competition in the training of sound scholars. The time is doubtless coming when more Egyptians will come forward as investigators duly educated in the critical use of evidence; and they will be welcome.

121 After all, it is hard to say whether the Egyptians themselves or the rest of the world have more to gain from the study of the age-long history of Egypt and of the no less enduring individuality of 133 its people. The country is self-contained enough, thanks to the geographical barriers that shut in the Nile Valley, to maintain a civilization answering to its own needs. Even physically the 149 Egyptian type breeds true to itself. As often as racial intermixture occurs, the foreign strain would seem to become recessive to the point of extinction. On the other hand, Egypt is situated at the 131 meeting-point of three continents. It presides over the junction 174 of the Western and Eastern water-ways of the Old World. How far its influence has extended, whether by direct or by indirect propagation, at various critical periods of history is a problem, much discussed at the present moment, on which the most distant regions may be able to throw light. Any diffusion of culture, however, tends to fade out toward its circumference, and is only to be fully understood by intensive study at the centre. In the case of Egypt it is possible to grasp the complex nature of the 175 centrifugal force thence set in motion all the more thoroughly because there is literary as well as material evidence at the disposal of the archæologist. Silent monuments, too, often form the only yield of the spade. Even pictures speak at best in riddles. Literature, however, when it came into existence in Egypt or in Mesopotamia could in some measure disclose that ethnic psychology which alone is the key to genuine history.

181 538 Nevertheless, the psychic life of a people is but partially and imperfectly reflected in its literature. Just as in the individual the unconscious part of the mind may be supremely determinative of the total character, so in a community the non-literary and

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hours and then left to go out. The vessels are removed from the oven when they are cold.

The water-jars (*balālīṣ*) manufactured at this place are entirely hand-made, and for this process a circular hollow in the ground, such as has been described previously, is used. Large, shallow saucers and bowls are made in the same way.

A large lump of clay, sufficient to form the whole *ballāṣ*, is placed in the hollow, and beaten into a preliminary shape with the cottage-loaf-shaped clay implement. The curved piece of wood is also used here to beat up the sides of the vessel. When bowl and saucers are being made the rims are beaten into shape with it likewise. A *garūt* is used to cut off any superfluous clay that may appear during the formation of the *ballāṣ*. These jars are then left to sun-bake for a short time before the rim is added with the aid of the wheel. The *balālīṣ* are baked for the same length of time as the *ziyār*.

I asked a potter who worked with the wheel how long it took to become proficient in the art, and he told me that he had learned it from his father, and had taken five years to become really skilled in his work. He, however, said that if he had learned it from some one else it would have taken him ten years to become an expert. His father, he remarked, was a good teacher as well as a very skilful workman.

The granaries, which are usually erected on the roofs of the houses, are made by the women out of clay and chopped straw, well mixed together. Each granary takes some time to complete, as it can only be made piecemeal. The finished portion must remain exposed to the sun until it is fairly dry before another can be added. When the whole is constructed it is left in the sun to harden thoroughly.

The granary has a circular opening at the top, covered by a clay lid, while near the base there is a small opening which is closed with a mud stopper. This latter opening is used when the supply of grain in the granary is low, the grain being more easily extracted through it than through the opening at the top, for many such granaries are from four to five feet high.

These granaries are usually roughly circular, with straight sides, the top slightly domed; but in some parts of Egypt many of them are globular, a shape possibly derived from certain basket granaries described below. Farther south, near el-Kāb, I saw some much

2: Blackman E-5 (1920-1926) 1927
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FIG. 104. CARRYING AWAY THE STRAW

believe, it will satisfy the *'afārīt*, who will eat some of the food thus placed for them. If the owner neglected to do this the *'afārīt* would take some of the grain.

This custom, as well as that mentioned before, of placing bread among the heaps of winnowed grain suggests a belief, at some period, in a corn-goddess, to whom offerings had to be made. So far as I have yet discovered there is no trace of such a belief left in the minds of the peasants, but these ceremonies certainly suggest the possibility of an earlier belief in some fertility or earth-goddess, and the name given to the last time of irrigating a field (i.e., *el-fiṭāmeh*) bears out this idea.

FIG. 105. HARVESTING-FORK

[Text continues on p. 180]

2: Blackman E-5 (1920-1926) 1927
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THE FELLĀḤĪN OF UPPER EGYPT

174 243 In the chapter dealing with survivals it will be seen that some of these harvest customs can be definitely dated back to very early times in the history of the country.

465 243 I have stated above that harvesters are usually paid in kind instead of in cash, and that the women and young girls carry these wages home on their heads. The methods of threshing and winnowing the corn received as wages are more primitive than those already described in this chapter. The threshing is done by beating

[291] [241]

FIG. 109. THRESHING WITH A STICK

with a stick (Fig. 109), and this process is often, though not always, carried out by the women. When threshed the corn is usually [415] placed in a large, round tin bath, and the winnowing is done by simply taking up the grain in the hands and throwing it into the air (Fig. 110). The chaff is blown away by the wind, the grain falling down again into the bath. It then goes through a second process of winnowing with a sieve.

256 The grain, when required for use, is ground in primitive hand-mills, and "two women . . . grinding at the mill" is quite a common sight in Egyptian villages (Fig. 111). The stones from which these hand-mills are made are obtained, so I was informed, from the desert, and are chipped into the desired shape. The flour is very coarse after this grinding, and, moreover, after it has fallen

3: Ayrout M-5 (ca. 1935) 1945
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Chapter V

THE FELLAH AS A PERSON

We have seen that the fellah's work consists entirely of physical labour and brings his whole body into play. Let us now consider the labourer himself, and examine the fellah from the physical point of view, his race, type, clothing, habits and so on. We shall find once again that water, soil and sun are the physical agents which explain and often even determine the physical constitution of the fellah.

Despite this dependence on the material environment, the liberty of the human will introduces an element of variety. But the will in its turn is subject to another factor, conformity to tradition, and this in the end produces the same result — stability.

(1) *Race and Type*

To what race does the modern fellah belong, and what is his genealogy and origin? No final answer has as yet been found to these questions. Nevertheless, any amount research has been done on the subject, and any number of theories, serious or not, evolved to explain the facts.

To go back no further than the eighteenth century, Volney, for example, declares the fellaheen to be of negroid extraction. Vivant Denon suggests a Caucasian origin. Poinsinet de Sivry, following Pliny the Younger, believes them descended from the Celts. Winckelman suggests Chinese immigration as a solution, and Moreau de Jonnes would put the cradle of the Egyptian race as far away as Polynesia.

Ethnologists of the late nineteenth century, with more knowledge and plausibility, sought a key to the problem nearer Egypt, either in Africa or in Asia.

The theory of African origin is upheld by Hartmann, and later by Flinders Petrie and Maspero, who class the Egyptians with the Ethiopians. Chantre, after anthropo-

144 metric research covering thousands of types both past and
174 present, concludes that the Egyptians, although not absolutely native to their present soil, are essentially Africans, of Libyan extraction, and that if there was any Asiatic infiltration, it had no influence on the race. (*)

Schweinfurth, relying on botanical evidence, believes Southern Arabia to be the source of the Egyptian race, while Amelineau, de Rougé, and (more authoritatively) J. de Morgan, who supports his theory by the comparative study of language, art, customs and physical characteristics, consider Chaldea to be a more likely source. (*)

The theory now in favour, because it is less simple, may be nearer the truth. It can be summed up thus: — In prehistoric times Asiatic invaders, perhaps Arabs or Babylonians, conquered the Nile Valley, and intermingled as the predominant race with people already established there, a composite stock of natives and Ethiopians.

This theory is a synthesis of the two earlier hypotheses, and has the advantage of taking into account facts which support both of them while allowing of the inclusion of the Egyptians in the family of *homo mediterraneus*, a compound of Semitic and Hamitic stocks which peoples North Africa, a great part of Hither Asia, and the shores of the Mediterranean, and shows, where it borders on the black races, certain affinities with the Ethiopians.

The study of profiles in ancient frescoes, and of skeletons discovered in a variety of excavations, obliges us none the less to recognise three original types: the Semites, long-skulled and of medium height; the Mediterraneans, short-skulled, with a short, straight nose; the Libyans, snub-nosed and short-skulled. But the climate and agricultural life have worn away these differences between indigenous and foreign elements and created a specifically Egyptian stock which is no less indivisible than the Nile Valley itself.

174 However all this may be, and although we may not
175 know precisely where the Ancient Egyptians came from, we can be quite sure that the present inhabitants of the country — or at least the fellaheen, and it is with them that we are concerned — are descended from the Egyptians of dynastic times, with whom they are linked without a break and almost without intermixture, despite the passage of fifty centuries and conquest after conquest from abroad.

The conditions of servitude and contempt in which the native population has been held by foreign conquerors since the decline of the Pharaohs have had the effect of preserving the race. Persians, Greeks, Romans, Arabs, Turks, French and English have in this matter all followed the same policy. They have laid hold on the riches of Egypt, and taken power in order to do so, but have neither associated with nor supplanted the fellaheen who produce the wealth. Egypt has always been too densely populated to be suitable for colonial expansion. The conquerors have never been numerous enough to modify the race of the conquered. Their manner of life has always been different, and contact with them has only aroused antagonism. 174 175

There has, however, been some penetration of nomads and negroes from near areas. After the Moslem conquest in the seventh century a number of Arabs settled in Egypt, not only in the towns but also in the countryside. As conquerors they were able to impose on the native inhabitants their language, their religion, some of their customs with regard to women, and their cruelty in vengeance. In spite of this the original inhabitants, a hundred times more numerous, especially in the countryside, with women stronger and more fertile, and a manner of life so persistent and unchanging, have marked the Arab elements with their own stamp. In establishing themselves on the black soil the Arabs adopted the traditions of those who ploughed it. This is still noticeable even today in the villages of the Upper Delta, where on account of the richness of the soil Arab immigration was heavier, and in hamlets recently settled on the edge of the desert. After three or four generations the scion can no longer be distinguished from the stock, or else it has proved too dissimilar to take the graft. Assimilation to type is in fact consequent upon assimilation of the fellah way of life. The Arabs who have remained nomadic, and live by the transport of cotton on camel-back, by pasturing flocks, or by robbery and murder,—those in fact known in Egypt as Bedouin,—differ markedly from the fellaheen by their finer features and their more excitable temperament.

Another fusion has taken place in the south, between fellaheen and negroes. Here, the two elements being more dissimilar, the mixture is more noticeable, but the Egyptian 174 174 175

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144 type is dominant, and the other recessive. This absorption
174 of neighbouring and therefore not unnaturally somewhat
175 similar elements by a settled people of greater vigour and numbers seems a logical process. Had the invaders or immigrants arrived in millions, had they come from Germany or the Balkans, they might perhaps have imposed their own type, despite the influence of climate and way of living. But the deserts on East and West, the depth inland to the South, and the unusual character of the Nile Valley, as well as the density of the original population, have kept the country free from all mass immigrations.

Thus both geographical and historical factors have conspired to preserve the Egyptian type. The country population especially retains a facial appearance distinguishing it among the countless mixtures of the Near East.

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144 It has been said that the Copts are the purest represen-
779 tatives of the ancient stock. This is true in the towns,
186 where the Copts are usually the original inhabitants, while the Moslems are for the most part descended from Arabs and Turks, and have married women from any and every country. Racial and physical differences are here very clear. In the country, however, this theory does not fit the facts. The fellaheen who have remained Christian and those who have become Moslems are of one and the same origin. If the former for religious reasons marry only with Christians and have thus kept the race pure, tradition has made the latter no less exclusive. The antipathy between fellaheen and Bedouin makes marriages between them extremely rare, and any union with a foreigner who may chance to live in the village is considered scandalous in the extreme.

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142 Thus it is possible, in describing the type, to generalise without appreciable error.

The fellah is a heavily built man, though not stout. His skull and face are broad, his forehead narrow, his eyes and hair dark. He has rather prominent cheekbones, a thick nose, full but not protruding lips, and a heavy jaw. His features on the whole are rugged but not ill-favoured, and are neither very sensitive nor very expressive. His thick wrists, ankles and neck distinguish him from the supple Bedouin. His back is rounded, his shoulders not so much sloping as bent in towards the chest, and his hips narrow.

7: Riad E-4, 5 (no date) 1960
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either in the Fayum Coptic or with a mixture of Greek origins, for we know that Fayum was once one of the important centers of the Greek Ptolemies.

HISTORICAL EVOLUTION OF THE EGYPTIAN PLOUGH

It is a well established fact that the first recorded form of plough is found on the monuments of Ancient Egypt. Many drawings from the Old and the New Kingdoms of Ancient Egypt can give us a picture relevant to question of the evolution of the plough. There is also a coloured wooden figure of the plough which belong to the 11th or the 12th dynasty kept in the British Museum, and many original ploughs were found near Fayum which belong to the Greek and Roman periods of the history of Egypt, and which are kept in the different Museums of the world, e. g. Cairo and Berlin. All these examples of the plough covering a very long time span can be used as a sound basis for the study of the history of the present Egyptian plough, if we add to it the description of the plough in the 18th century A. D., recorded by Norden [1], and by the scientists of the French Expedition to Egypt [2].

In an unpublished report in the Agricultural Museum of Cairo, a short note is written on the subject of the ancient Egyptian plough. Extracts from the note runs as follows :

> « The ancient Egyptian traditions alledge that the Egyptians are indebted to Osiris, God of Plants in the Egyptian Pantheon, for the knowledge of the plough. Evidences from early drawings prove that the plough in its original form was worked only by man, and it was only drawn by oxen in the drawings of Meidum, i.e., begining from the third Dynasty. In that form the plough had only one wooden share for ploughing the soft soils ; and had a double wooden share covered by a sheet of bronze to plough harder soils.... The plough was called in the Egyptian language SIKKA. »

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[1] See references under Norden.
[2] See references under Girard.

7: Riad E-4, 5 (no date) 1960
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In this note it is interesting to see that before the third Dynasty (the beginning of this Dynasty is attributed by Erman to be about 2900 B.C.)[1] the Egyptians used hoes to break the soil, or at least that is what one can understand from the phrase « the plough in its original form was worked only by mans. Drawings of hoes used to break the soil came to us from the remains of the first Dynasty[2]. The plough in its early form, and throughout the Old Kingdom, was composed of a wooden share to which two short handles were fixed from the rear end of the share, while a long beam was fixed to it from the center. The beam ended with a yoke which was at that time attached to the horns of the drawing oxen. In the Middle Kingdom there was no development to this plough, but

> ... in the New Kingdom we see that the handles became longer, and hand grips were added to the handles. We also see that the yoke was replaced by another type which is not attached to the horns, but which rests on neck of the animal ... this method was taken over from the method of saddling the horse... »[3].

Of special interest in the note of the Agricultural Museum of Cairo cited above, is the appellation of the plough in Ancient Egyptian. Sikka as the name of the plough was conserved till now in Arabic Egyptian, and is used to denote the share of the plough in Upper Egypt[4]. Sikka as the name of the plough in Ancient Egypt may have been supplemented by or was used along with another name :

> « ... The name of a plough was HEBI ; ploughed land appears to have been ART, a word still traced in the Arabic HART... »[5].

Wilkinson states that the Ancient Egyptians as observed by Diodorus, used hoes extensively, but on occasions used light ploughs which traced slight furrows, while other peasants followed the plough with hoes to

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[1] Erman, p. 16.
[2] Erman, p. 496, footnote 4.
[3] Erman, pp. 496-497. Also see plate 8 of this article.
[4] See list of appellations given in this article.
[5] Wilkinson, Vol. II, p. 393.

7: Riad E-4, 5 (no date) 1960
MR13 Fellahin MR13

*407 ● 174 break the tenacious soil. He continues to describe the plough in Ancient Egypt at large as follows :

> « The ancient plough was entirely of wood and of a very simple form like that still used in Egypt. It consisted of a share, two handles ; and the pole or the beam ; which last was inserted into the lower end of the stilt, or the base of the handles, and was strengthened by a rope connecting it with the heel. It had no coulter, nor were wheels applied to any Egyptian plough : but it is probable that the point was shod with a metal sock, either of bronze or iron. It was drawn by two oxen ; and the ploughman guided and drove them with a long goad, without the assistance of reins which were used by the modern Egyptians. He was sometimes accompanied by another man, who drove the animals, while he managed the two handles of the plough ; and sometimes the whip was substituted for the more usual goad. The mode of yoking the beasts was exceedingly simple. Across the extremity of the pole a wooden yoke or cross-bar, about fifty-five inches or five feet in length was fastened by a strap ... At either end of the yoke was a flat or slightly concave projection, of a semi circular form, which rested on a pad placed upon the withers of the animal, and through a hole on either side it passed a long thong for suspending the shoulder pieces, which form the collar. These were two wooden bars, forked at about half either length, padded so as to protect the shoulders from the friction ... »[1].

It is in the Greek and Roman Periods in Egypt that we see another development over the plough of the New Kingdom. Indeed we find in the two types whose sketches are reproduced on plate 6, the prototypes of some of the present ploughs in Egypt. The plough which was found in Darb Gerza (Plate 6 b) the origin of which is kept in the museum of Berlin, present us with a wooden share and base much similar to the base of the above described plough type V ; the sides of the base are chiselled in two steps, one to adjust the handles, and the other to fix the beam. The only difference which may be observed in the method of fixing the handles is that it may have been fixed by nails and not with bands like type V. It is also to be noted that the beam was holed at its rear end to enable to

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[1] Wilkinson, Vol. II, p. 392-393.

7: Riad E-4, 5 (no date) 1960
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insert the rear of the base through it, and a nail may have been used in the projecting part of the rear of the base to prevent the beam from sliding out. This much complicated method was substituted by the simpler method of attaching the beam to the base by means of iron bands used now in type V. The beam here is the usual straight beam used in much of plough varieties in Egypt, but in this prototype there is no pin. Instead and in place of the pin socket in the contemporary ploughs, there are two parallel holes in the base, and a rope end is passed in one of these holes then reappears from underneath in the other hole, then passed over to be wind on the beam. In this way it is certain that the angle of the plough never changed unless the rope was changed. On the fore part of the base there are no traces of nailing a metal share to it, but this does not exclude the possibility that the metal share was adjusted to the base not by nails but by bending the edges of the metal round the sides of the base. This may be proved by the various metal shares especially of iron —which belong to the Greco-Roman period, and whose origin are kept in Berlin.

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The plough which was discovered in a house at Harit in Fayum (plate 6a), and which belong to the Roman period, is kept in the Egyptian Museum in Cairo. This type gives up a combination of both contemporary types II and V, as it is clearly exemplified by the presence of a curved beam, and projecting double handles. The very characteristics of the curved beam are represented here: the beam extension which is permanently fixed here with palm fibers, and the pin which supports the beam is made of wood and attached to the beam, not through inserting in a socket, but by binding it to the beam by a rope, probably of palm fibers too. The beam, nevertheless, is additionally fixed by a method which is not found in type II, but by a method retained in the southern tip of Upper Egypt, and in an altered method in Tripoli.[1] This being a rope connecting it to the handles as it is clearly seen in the sketch. The handles are projecting rearwards, and fixed to the base by nails, though another fastner, a rope, tightens them to the base. The grip is lacking in this plough, and the cross bar which figures in the sketch between the two handles may have strengthened the handles, rather than functioned as a grip.

[1] [See category 116, End plate VIII --Analyst]

7: Riad E-4, 5 (no date) 1960
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Baumann, agree to the fact mentioned above, namely that the development of the plough was sharpest with the begining of the Greek and Roman Periods, and describes another form the Egyptian plough from the late period, whose origin is kept in Berlin Museum in the following lines :

> « Wichtig aber ist, dass auch der altägyptische Pflug zu diesem Typus gehört, wenn er auch durch seine Doppelsterzigkeit äusserlich etwas anders erscheint. ... Durch alle Epochen bis zur ptolemäischen Zeit blieb der Pflug mit wenig Änderungen sehr ähnlich... Das in Berlin befindliche Fundstück aus der Gräberstadt im westlichen Theben zeigt eine starke Knickung der Sterzen. Hier mündet auch der Grindel ein. ... Dieser altägyptische Pflug hat im modernen Ägypten seine direkte Fortsetzung gefunden in den hier auftretenden zweisterzigen Pflügen, die allerdings schon wesentlich komplizierter erscheinen. Hier zweiteilt sich eine richtige, von der Sterze getrennte Sohle ab, ohne dass aber in den meisten Fällen der Charakter des alten Spaten-Pflugs verloren geht »[7].

It is clear from this quotation that Baumann holds the opinion that though the Egyptian plough has undergone several changes from early dynastic period till the present time, still it holds to its basic spade-like character. This opinion is not only Baumann's, but we also find similar opinion in Winkler [8] and both of them based their conclusions on the extensive studies of Lowe [9]. And it is a fact that though the different types of the Egyptian plough may be so complicated in their structure, yet they function on the same principles of a hoe. But we should be aware of the fact that pushing this material similarity far to the realm of culture would lead to much misunderstanding. Using animals in this plough is in itself an evidence of the cultural differences between hoe and plough cultivation, not to mention other differences in techniques of ploughing, production, of crops, and the many other social implications.

Not much description of ploughs in Egypt occur after the Christian Era, and it appear that slow variations took place during this long

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[7] Baumann, p. 313.
[8] See reference under Winkler.
[9] See reference under Lowe.

7: Riad E-4, 5 (no date) 1960
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period; variations which took place due to cultural influences encroaching upon Egypt, but while accepting such influences, we are inclined to think that from the Greco-Roman Period onwards, the forerunners of the Egyptian ploughs were fixed; and throughout two millenia, mixture, selection and adaptation played their role in founding the existing plough types. We cannot ascertain any date for the different existing types, but we may say that they do existed in Egypt in a form very near to its present form since at least three centuries. This may find a support in the drawing of the plough by Norden [1] who flourished in the 18th century, and visited Egypt around the middle of that century. It can be also attested by the drawings and description of the Egyptian plough by the scientists of the French Expedition which took place late in the 18th century.

Norden drew a plough in the village Gamase in Upper Egypt, and from the sketch of Norden one can see that plough belong to type IV of the northern part of Upper Egypt. The base may be larger than in reality, and the beam is fixed to the base by a rope instead of the usual nail. The beam extension is present, but not curved upwards like the present extension in both types of Upper Egypt. The whole drawing seems to be more or less stylish in some points, though it gives a good idea about the form of the plough at that time.

The plough drawn by the French in «Description de l'Egypte» [2] is said to belong to lower Egypt (the Delta) and around Cairo. In his comment on the drawing, Girard states:

> «Nous disons seulement que celle (charrue) est particulièrement en usage dans la basse Egypte est aux environs du Kaire; celle de la partie méridionale du Sa'yd est beaucoup plus légère et beaucoup plus grossièrement travaillée.
>
> Pour se former une idée de cette dernière, il suffit de concevoir deux pièces de bois d'un mètre de haut, coudées naturellement à leur extrémité inférieure sous un angle de cent degrés environ. Ces deux pièces, ... sont retenues fixement, à un décimètre de distance l'une de l'autre, par deux chevilles; l'une a quatre décimètres

[1] Norden, pp. 54-55, and plate LVI.
[2] See references under Girard.

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et l'autre à un mètre au-dessus du même coude. Cette dernière cheville les traverse toutes deux, et présente extérieurement deux poignées par lesquelles on peut la saisir [1].

The assumption that such a plough may be found around Cairo may be right. Furthermore it is implied that this type prevails in middle Egypt, because Girard specialised another plough form for the southern part of Upper Egypt. This plough belongs, in our classification, to type IV. If we remember the geographical distribution of plough types, type IV also exist in a pocket between Damietta branch and lake Manzala, but other parts of the Delta belong to different ploughs. Therefore the generalisation of Girard as to the presence of this type all over the Delta is erroneous. Furthermore, making the double handles of the southern Upper Egyptian plough, is not as simple as the description of Girard may convey to the reader. It is rare to find two pieces of tree branches which have the same angle, and as we have seen one of these ploughs in process of making in the desert edge of Luxor district and in the desert edge of Ramadi South –areas culturally poor by the mere facts of there geographical locations and isolations– we are inclined to think that working out the desired angles of such handles needs a good deel of traditional labour and workmanship. Yet complicated techniques are evidences of conservatism rather than progress, hence we can assign older age to ploughs belonging to type V, than for example those of type IV.

This discussion leads us to the crucial question : How did the present types evolved into their different forms?

We have already stated that plough types of the Greek and the Roman periods which we have already described, formed the prototypes of the present ploughs in Egypt. They combined the curved beam, and the double handles in one form or the other. In our classification of plough types we have refered to two basic types, namely the curved beamed type, and the double handled type. Each of these types has his own cultural and geographical region : the first type reigns in the Eastern Delta, while the second type occupies the southern parts of Upper Egypt.

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[1] Girard, Vol. XVII, pp. 22-25.

7: Riad E-4, 5 (no date) 1960
MR13 Fellahin MR13

Now the plough of Dynastic Egypt was more or less double handled, and if the discoveries in Upper Egypt or Fayum reveal, even through the Greek and the Roman periods, the constance of double handles, there is then no doubt that such a characteristic in the Egyptian plough is obviously very old. Again if we consider another part of the plough, namely the beam, we find that the straight beam figures out in all ancient findings, until curved beam appears suddenly in the Roman period, side by side with the straight beam. This sudden appearance is only confined to Fayum, no evidence known refer to the appearance of the curved beam in Upper Egypt, but it is highly probable that curved beam appeared also in different parts of the Delta. We must notice that the curved beam of Fayum appeared in connection with a double handled plough—a fact which either indicate that that type of beam originated with the double handled principle, or that it originated in association with the single handled plough. In view of the constant appearance of the curved beam with the single handle, not only in contemporaneous Egypt, but also in Southern Palestine, Tripoli [1], Tunisia [2], and in South Arabia [3], we may conclude that the combination of double handles and curved beam of Roman Fayum represent an adjustment of the curved beam incursion southwards from the Delta. All this discussion means that the roots of the present type V plough are definitly older than prototype of plough type II.

Lesser in his studies of the plough has settled down the problem of the curved beam plough. In his steps followed both Winkler and Baumann. Winkler states :

> « Der Krümelpflug weist nun deutlich nach Griechenland und Italien hinüber, dort ist dieser Pflug seit sehr alter Zeit zu Hause. Wenn wir zur Bezeichnung der Getreidehaufen das rumänisch Balaeg (Lateinisch oder italienisch Bilancia) finden, dürfen wir vermuten, dass dieses Wort besonders am Mittelmeerpflug, dem Krumelpflug, gehaftet hat» [4].

[1] See plate 8, drawings of the plough of Palestine and Tripoli based upon information furnished to me by some palestinian and libyan students in the Faculty of Arts, Ain Shams University, Cairo.

[2] See plate 8 c, after Baumann.

[3] See plate 8 d, drawn upon photograph 37 in Helfritz (see references under Helfritz).

[4] Winkler, p. 163.

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7: Riad E-4, 5 (no date) 1960
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We have no doubt that the single handled curved beamed plough belong to the Mediterranean cultural region, and because Egypt, though lying on the coasts of the Mediterranean, represent in its greater part a somewhat isolated area (especially Upper Egypt), it has evolved its plough type according to its needs. Furthermore Egypt in nearly all its Dynastic history was an independent state, and perhaps that helped towards keeping traditional implements. When the Greek family of the Ptolomies consolidated its rule in Alexandria, Egypt was open now to the influences of the Greek-Mediterranean culture. This still attained its zenith during the Roman occupation of Egypt. From the Roman period onwards Egypt was part and parcel of successive macrocosmos, namely the Roman Empire, the Arabic Empire, and the Turkish Empire. We are sure that so much influences played its part in the development of the Egyptian plough, but these influences did not overcome the two handled plough, which resisted these encroachments and succeeded to remain nearly intact in southern Upper Egypt, and co-existed with the mediterranean single handled plough in the Delta, intact in its isolated pocket in the Prairies of Lake Manzala, and in the northern parts of Upper Egypt. It is only in most parts of the Delta which was incessantly under the influence of the Mediterranean, that a compromise between the Egyptian double handle-straight beamed plough and the Mediterranean single curved-straight beamed type, took place in the plough types I and III, i. e., the split handle-straight beamed type, and the single handle-straight beamed type. The characteristics of plough type I gives us every reason to conclude that it leans heavily on the principle of the Egyptian double handled plough, the only compromise is that the handles are united in the upper part, but the projection of the handles was kept to a certain degree, together with the straight beam. Type III inclines more to the Mediterranean plough in keeping the single handle, but the compromise took place in the change of the curved beam to a straight beam.

One can now safely conclude that the evolution of the Egyptian plough took the following periods and events :

1. Throughout Dynastic Egypt the double handled-straight beamed plough persisted all over Egypt. This plough deserve the appellation

7: Riad E-4, 5 (no date) 1960
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of the Egyptian plough due to its archaic age. In its relatively purest form it survive in plough type V.

2. Begining of the Greco-Roman period the Mediterranean plough extended over many parts of the Delta, and the northern part of Upper Egypt including Fayum. But we are certain that it did not exist in its pure form, at least in Fayum, and was adjusted to the double handle principle. In its pure form it persist now in Eastern Delta. This fact may be explained by the everlasting stream of Arab settlers in this part of the Delta being geographically exposed to Arabia. Plate 8 show us that the Arabs of Palestine, and those of Hadramut use the Mediterranean plough. The same plough is used in the Oasis of Siwa, the coast West of Alexandria, and in Libya and North-west Africa. It is only Western and Central Delta which break through this continuous distribution of the Mediterranean plough. One can conclude that this plough type did not reign over the Delta as a whole, even in the Greco-Roman period. We must not imagine that as soon as it came to Egypt, it expelled the older double handled plough. We should also bear in mind that neither the Greek nor the Romans ploughed the land themselves, but formed a governing aristocracy in Egypt. It is highly probable that this plough type gained sure footing after the Arabic settlement in the Eastern Delta. This is due to the fact that the Arabs settled down and cultivated the land themselves somewhere around the 10th century. Bearing this in mind however, does not negate the pre-Arab existance of this plough in different parts of the Delta.

3. Plough type IV, which retains most of the characteristics of the type V, was affected but slightly by the Mediterranean plough. This may be proved by the fact that the handles does not retreat or project rearwards, but are fixed at nearly right angles to the base. This is a special characteristic of the single handle of the Mediterranean plough.

4. Plough type I has been already mentioned.

5. Plough type III, has been also mentioned, but we may add that this type probably represent the newest adaptation of plough types in Egypt.

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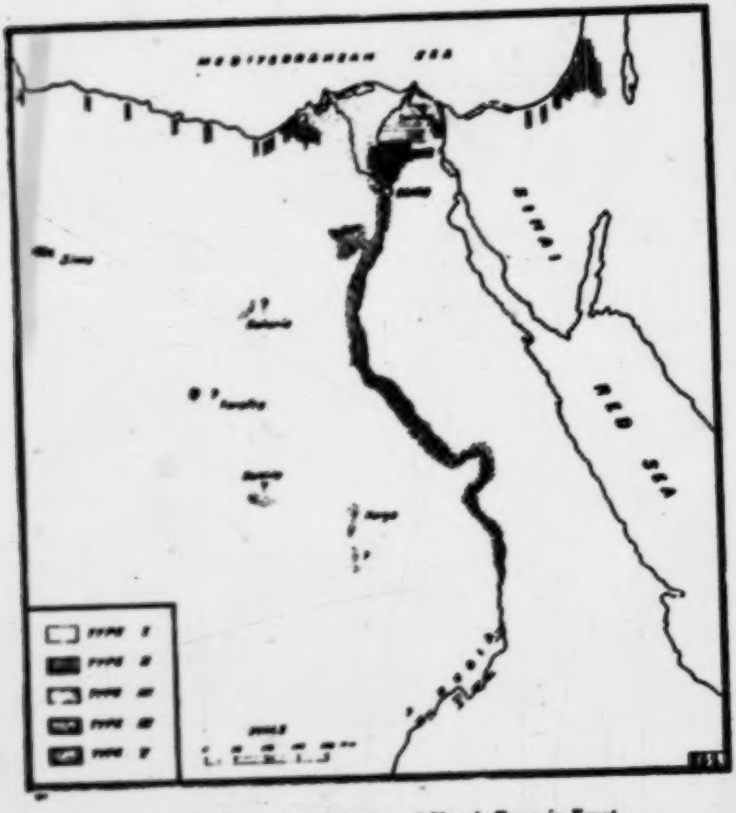

Fig. 3. Regional Distribution of Plough Types in Egypt.

RETROSPECT

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The basic plough types just described are not exclusive to Egypt. We have already seen that plough type II has a wide diffusion in North Africa and the Middle East. It may also exist in Tibit, if the drawings reproduced by Ratzel [1] are true. But already in Tibet we see another

[1] Ratzel, Vol. III, p. 384.

7: Riad E-4, 5 (no date) 1960
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[End Plate V]

EVOLUTION OF THE EGYPTIAN PLOUGH
I. DYNASTIC PERIOD

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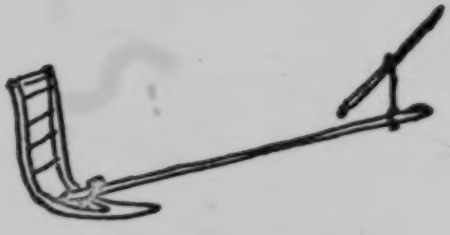
(a) — Old kingdom (after Erman fig. 202).

(b) — 11-12 dynasty 2100-1800 B. C. wood figure, British Museum (after Breasted, Plate 70).



(c) — New Kingdom (18th dynasty). (after Erman, fig. 203).

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[End Plate VI]

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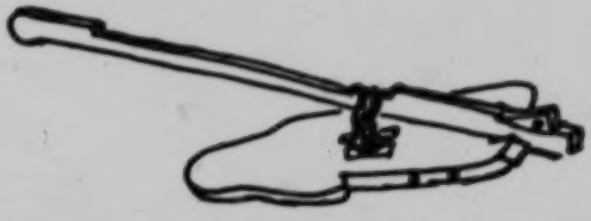
EVOLUTION OF THE EGYPTIAN PLOUGH
II. GRECO-ROMAN PERIOD

(a) — Harit Plough [Fayum], double handle. — Curved beamed Roman Period (origin Egyptian Museum, Cairo).



(b) — Darb Gerza Plough double handle. — Straight beamed Greco-Roman Period (origin Berlin Museum, drawn after Model in the Agriculture Museum, Cairo).

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[End Plate VII]

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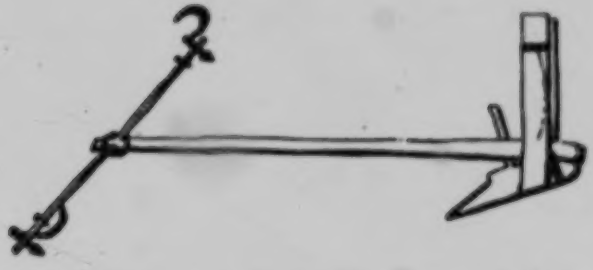
EVOLUTION OF THE EGYPTIAN PLOUGH
III. MODERN TIMES

(a) — The Egyptian Plough after Norden (mid 18th. Century) Upper Egypt
(See Norden, Pl. LVI, pp. 54-55).



(b) — The Egyptian Plough after Description de l'Egypte
[late 18th. Century] (Planche IX, Tome II, Etat Moderne).

42.

The Inventor of the Shādûf.

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Shādûf is the modern name for a very ancient contrivance for raising water from the river to the higher level of the fields. There is evidence of its existence in Egypt as early as 1500 B. C. It resembles our well-sweep. Tied to the longer end of the lever by a rope, usually of plaited palm-fibre, is a leather pail, while the shorter end is weighted by a large stone or a lump of dry, Nile mud. The pail is filled in the river by the laborer and then emptied into a trench in the field above. (Compare the illustration.) If the banks are high, two or more shādûfs are employed, ranged in tiers, one above the other.

Of course the name of the inventor, Ṣâliḥ Zabâdi is mere invention; just as names are frequently inserted at pleasure, in such songs.

Śawâdif
we-ḥbalha lif
wedlauha-glâd ma'ẓẽ gudâdl.
We-aṣlo ma ṭalla' ei-śawâdif
el-marḥûm Ṣâliḥ Zabâdi.

Shādûfs,
Their ropes are of palm-fibre
And their pails of goat-skins.
And it was in ancient times, that shādûfs were invented
By the blessed Ṣâliḥ Zabâdi

[P. 42 is blank]

9: Klunzinger D-5 (1863-1875) 1878
MR13 Fellahin MR13
Upper Egypt

512 164 262 After his evening devotions the dweller in the town wends homeward to his house, where his supper is already awaiting him. At this meal, which is generally the principal meal of the day, he quite acts the gourmand. His wife brings it to him on a round woollen board elevated on pieces of wood or short feet (*tablieh*); among richer people a shield-like metal plate (*senieh*) is used instead. The basis of the meal is bread made of wheat or millet flour, or hot unleavened cakes—of which he devours incredible quantities—baked over a fire of dung. His wife has also boiled or fried for him a fish with onions and oil, or there lies in the pot a young pigeon or a fowl, the juice of which tastes excellently when the cakes are dipped in it. Sometimes also a small piece of mutton, buffalo, camel, or goat flesh has been procured, with which the soaked *bemiyeh* or the viscous-juiced, spinach-like *molochieh* are cooked. These, however, are the more expensive viands, and in the evening also people on ordinary occasions are satisfied with the *ful*, which has become so much a national dish, and which (beans in general), according to Herodotus, was forbidden to the ancient Egyptians, or at least to the priests, and hence also to the Pythagoreans. Other dishes are such as lentils boiled in water without flesh, ful with molochieh, a thick flour paste, coarsely ground barley or wheat, a cake made with butter, an omelet, fruit, roasted grain, salt, and caraway, and especially raw onions. All these except ful were also eaten by the ancient Egyptians, with the addition of papyrus and lotus. The consumption of lentils was so general that Strabo believed that the nummulites of the mountains were the fossilized remains of the lentils used by the labourers. Whenever it is possible two or three kinds of dishes must be on the table, and the inhabitant of the town tastes of them indiscriminately, taking a piece now from this, now from that.

[915] [252] [104]

512 After the evening meal our citizen either remains at home enjoying a dignified ease in his harem, or he takes up his position before his house, stretched out in the dust of the street, or squatting amidst a knot of peaceful neighbours; less frequently he visits the café again, or calls on a friend in his house or court-yard if he has a friend able and ready to

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9: Klunzinger D-5 (1863-1875) 1878
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796 [169] while those who have lost some one dear to them recall him or her to their thoughts, proceed to the cemetery (especially the women), stick a palm branch into the grave mound, distribute pastry and alms, and even pass the night there with their family.

The other feast follows three months after. It is called the Great Feast or Feast of Offering, and lasts for four days, but is really the smaller feast. The baking, cannon-firing, receiving of visitors, embracing, congratulating, and dressing go on as at the little feast; the festive gaiety is, however, dulled, and is not so universal as after the Ramadan. The chief ceremony [182] on this occasion is the eating of "offering flesh" in memory of the offering of Abraham. Every believer *must* have his [262] piece of meat on this day, and anyone who cannot procure it for himself receives it from his richer neighbours, each of whom offers a sheep for every member of his family. The native Christians abstain from flesh on this day out of [188] opposition. This is the most brilliant period of the pilgrimage in Mecca.

FEAST OF THE SAINTS.

796 796 In the middle of the month Shaalan, which precedes Ramadan, is celebrated the great annual jubilee (a kind of wakes), when every town that can claim to have had a saint of any note, having chosen him as its patron, honours his memory by some kind of festive demonstration—the saint having been a man gifted by God with miraculous power, not necessarily on account of great piety, but oftener as a compensation for harmless and innocent imbecility. The [194] ancient Egyptians also had their patrons and protectors, namely, special divinities or forms and varieties of such for 796 particular cities. In Upper Egypt the chief festival is that [184] of the Sheikh Abder-Rahim at Keneh; it is for Upper Egypt what the celebrated fair at Tantah is for Lower Egypt. The latter is evidently a continuation of the ancient Egyptian feast of Diana at Bubastis, or is analogous to it. From the beginning [178] of the month onwards some bustle prevails round the temple

9: Klunzinger D-5 (1863-1875) 1878
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Upper Egypt

immense. The town contains twice or thrice as many strangers as inhabitants, and these are all on foot. Camels behung with coloured cloths, ribbons, carpets, and bells, carry the *mahmel* or "ark" of the tutelary saint, which is covered with the grave-cloth embroidered in gold and silver; the main part of this mahmel, a quadrangular wooden frame with a pyramidal top, may be seen at other times on the roof of the sheikh's building. The anniversary of other saints is also occasionally celebrated at the same time, and each has his mahmel. These processions have an unmistakable similarity to those that took place at the clothing of the statues of the ancient Egyptian deities. When the camels are collected the procession starts. The advanced guard is formed by a large number of swift camels, whose riders, sitting upon rich housings, and themselves decked with gay garments, gallop backwards and forwards and display their dexterity. Others show their horses' action, while boys strive to get their donkeys to gallop. Pipers and kettle-drummers head the procession itself. (it is only the military that have drums and trumpets proper), then comes the chorus of day and night watchmen, followed by the Turkish soldiers and police-officials in full regimentals. This armed body keeps up a perpetual fire, loading their old-fashioned guns and pistols to the muzzle. In their midst rides the governor of the province or his representative on a richly caparisoned steed, the procession being joined also, when possible, by a squadron of Bashi Bazouks or irregular troops, and a company of regular troops of the line. The camels with the mahmels, each led by a man, form the middle of the festal procession. Under the frames of the mahmels peep out boys and girls who have been elevated to this blessed seat, either in virtue of their rank, or by the recommendations of their fathers. Before every camel a body of men dance and sing pious odes, hymns and verses of the Koran; gay flags consecrated to the sheikh are carried alongside of the camel. Behind follow more musicians, and after them dancing-girls, who are indispensable even to such pious solemnities, and are believed not to have a disturbing effect upon the devotion appropriate to